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W. H. ALBACH.

CASH AND PARCEL CARRIER APPARATUS.

No. 490,093. Patented Jan. 17, 1893.

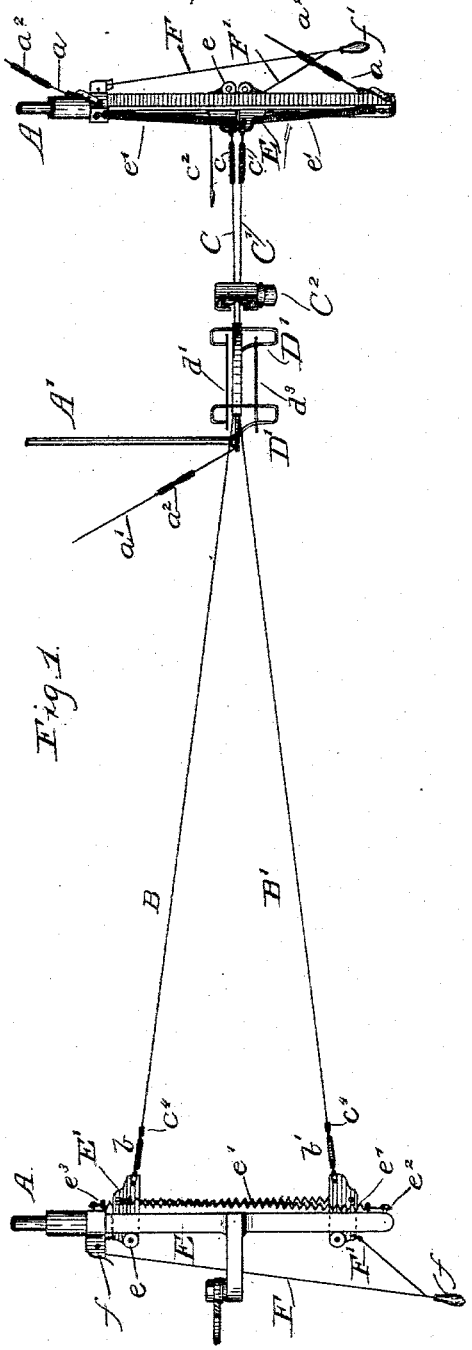

Fig. 1.

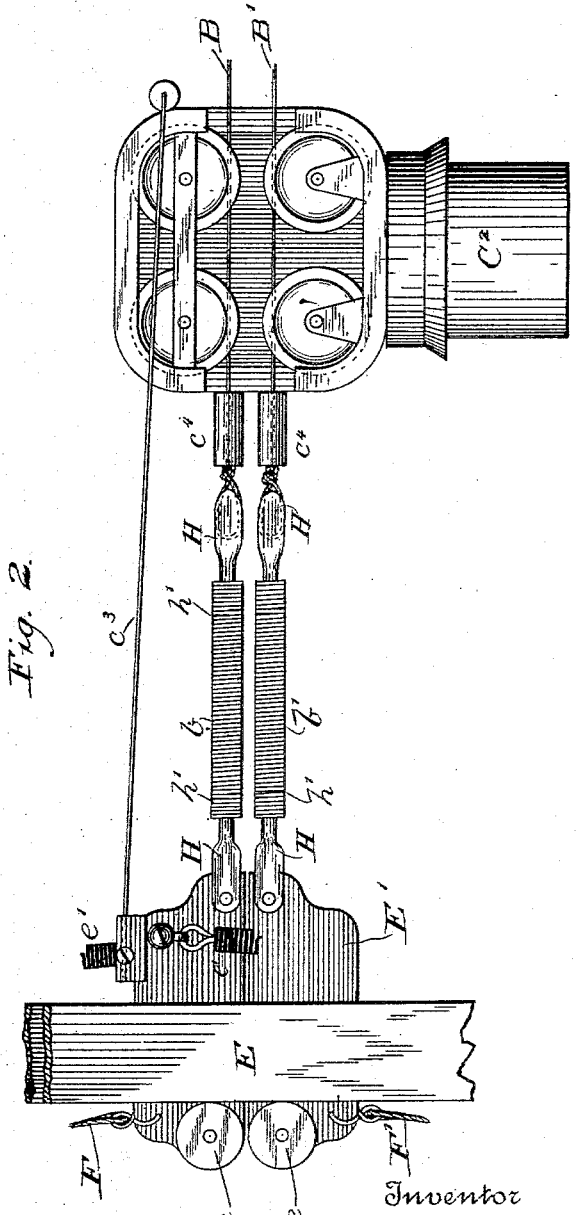

Fig. 2.

Witnesses

Chas. E. Gorton.

L. Wasall.

Inventor

William H. Albach

By his Attorney

Joseph G. Parkinson

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W. H. ALBACH.

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Fig. 3.

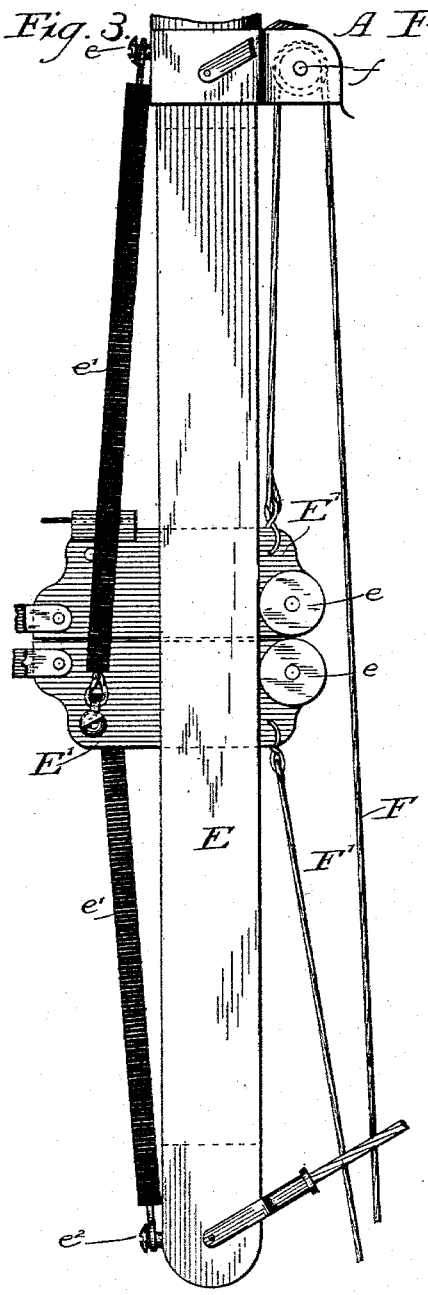


Fig. 4.

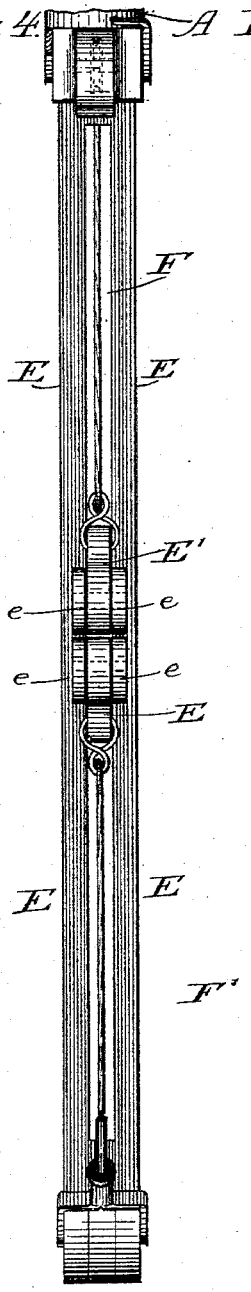
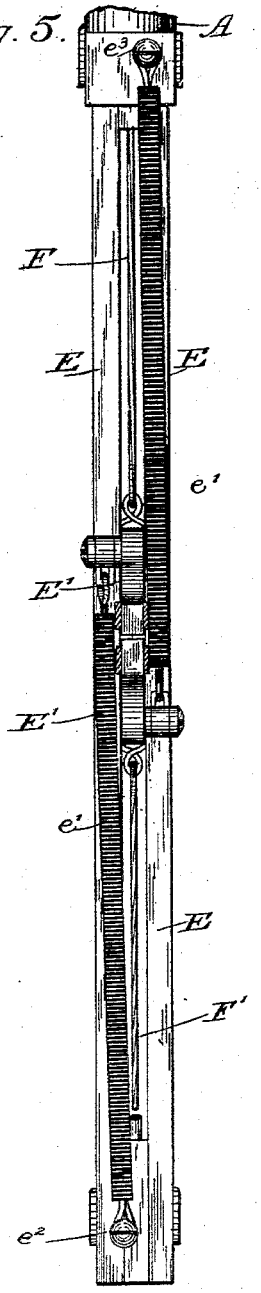


Fig. 5.



Witnesses

Chas. E. Gorton.

Ld. Vassall.

Inventor

William H. Albach.

By his Attorney

Jacob G. Parkinson

(No Model.) 4 Sheets—Sheet 3.

W. H. ALBACH.

CASH AND PARCEL CARRIER APPARATUS.

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Fig. 6.

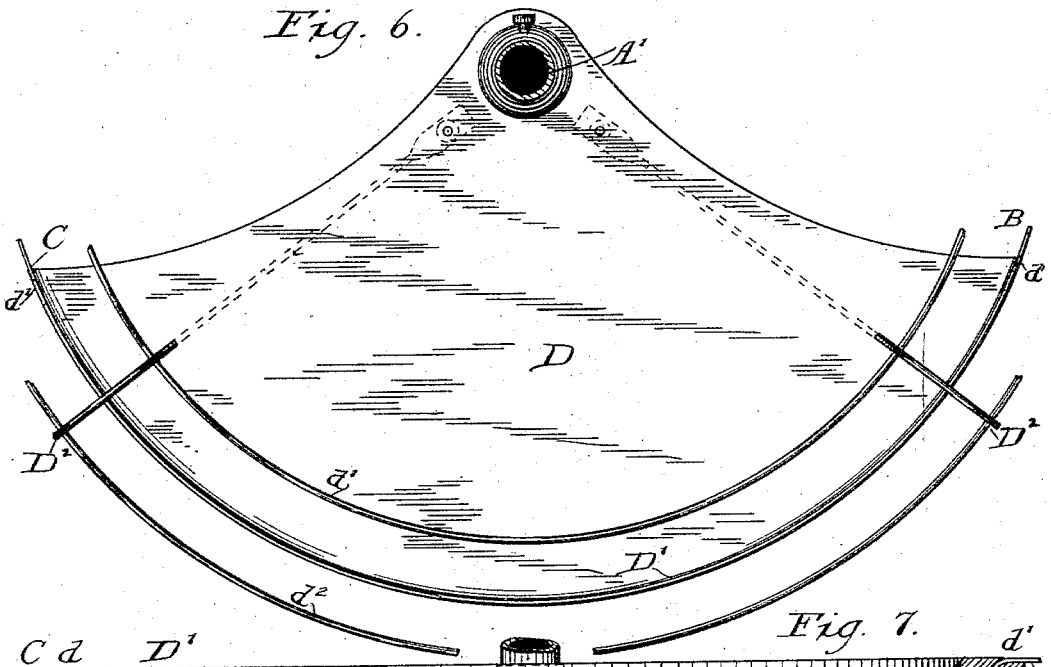


Fig. 7.

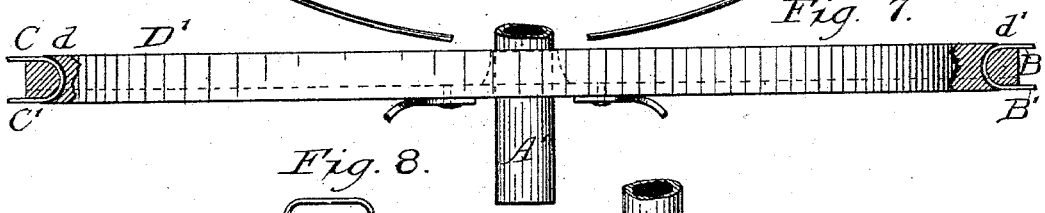
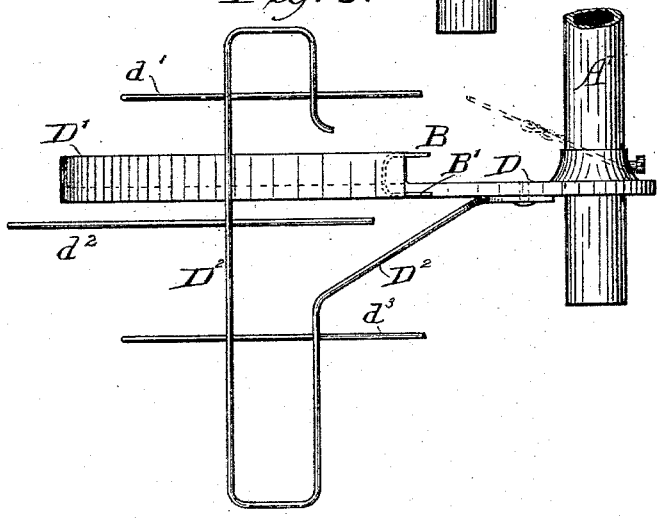


Fig. 8.



Witnesses

Chas. E. Gorton.

Ld Vassall

Inventor

William H Albach.

By his Attorney

Joseph G. Dennison

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W. H. ALBACH.

CASH AND PARCEL CARRIER APPARATUS.

No. 490,093. Patented Jan. 17, 1893.

Fig. 9

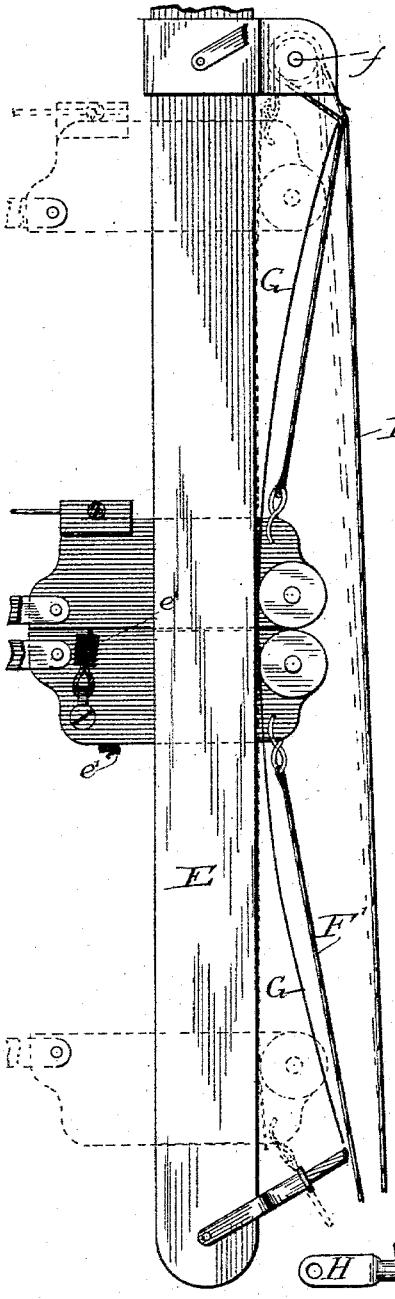


Fig. 10.

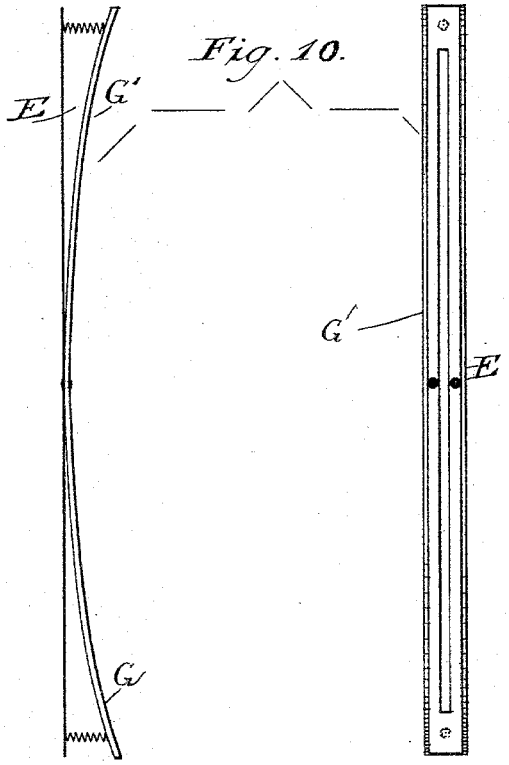


Fig. 12.

Fig. 13.

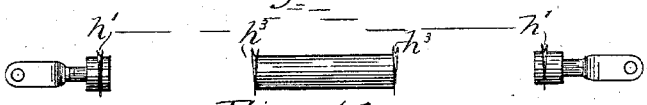
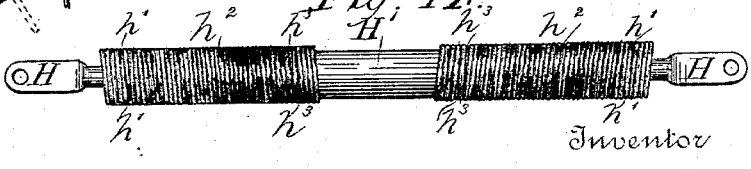


Fig. 11.



Witnesses

Chas. E. Foster.

Ld. Vasoll.

Inventor

William H. Albach.

By his Attorney

Joseph A. Parkinson

UNITED STATES PATENT OFFICE.

WILLIAM H. ALBACH, OF MANSFIELD, OHIO, ASSIGNOR TO THE BARR CASH AND PACKAGE CARRIER COMPANY.

CASH AND PARCEL CARRIER APPARATUS.

SPECIFICATION forming part of Letters Patent No. 490,093, dated January 17, 1893.

Application filed August 28, 1889. Serial No. 322,262. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. ALBACH, a citizen of the United States, residing at Mansfield, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Cash and Parcel Carrier Apparatus, of which the following is a specification.

My invention relates to that type of ways for cash and parcel carriers in which the carriage travels along one or more wires and is urged to and from the stations by an impelling force imparted, so far as one feature of the invention is concerned, in any suitable manner; but so far as other features are concerned, by spreading the wires of the track at such station so as to cause a wedging action on the wheels of the carrier, as in the well known Barr system.

The first feature of my invention relates to improved means whereby the carrier is enabled to turn a bend or corner to pass from one station to another invisible from the first, or to avoid some obstruction, and the other features of said invention relate to improvements in means for spreading apart the wires at the stations.

In the drawings: Figure 1 represents a side elevation of a way or track for cash-carriers, constructed according to my invention; Fig. 2, an enlarged detail thereof, representing one of the stations with a carrier in position; Fig. 3, a side elevation of the spreading devices at one of the said stations; Fig. 4, a rear elevation, and Fig. 5, a front elevation thereof. Fig. 6 is a top-plan view of what may be styled the "turn-plate," whereby the carrier is led around a bend or corner; Fig. 7, an edge elevation thereof, taken from the center of turn; Fig. 8, a side elevation, and Fig. 9, a modification of the spreading device; Fig. 10, details in edge and rear elevation, of said modification; Fig. 11, a spring turn-buckle designed for use upon the track-wires, and guys of the way, and Figs. 12 and 13, details of said turn-buckle:

In the general view of the track or way in Fig. 1, A represents pendent guide-brackets at the respective stations; *a*, the guys by which they are braced;

A′ is an intermediate pendent bracket supporting the turn-plate, and *a′* the guy by which said bracket is braced against the strain. In this guy, as well as in all others, I propose to insert elastic sections, a^2, of strong coiled wire, which may also constitute a turn-buckle, as hereinafter described.

B and B′ are two track-wires, at, for instance, the in or cashier's station, and leading thence to the turn-plate and connected at their station-ends to the spreading devices by spring coils *b* and *b′*, which hold them in constant tension, their out ends being attached to the turn-plate and therefore requiring sufficient elasticity to compensate for the spreading movement.

C and C′ are two wires or trackways at the out or salesman's station, likewise connected to the spreading devices by spring coiled sections, *c* and *c′*, while at the other end they are attached to the turn-plate in like manner, with the wires at the cashier's station and c^2 is a catch at the salesman's station for the carrier, C^2, which is represented part way down the line, approaching the out station, and c^3, in the detail view in the second figure, a different and well known form of catch which may be used in place of the other, either being interchangeable, according to the construction of the carrier, while C^4, is a buffer slipped over one or both of the wires at each station.

The turn-plate D is a thin sheet-metal of quadrant form having its curved edge upturned or an independent curved flange, D′ secured thereto of slightly more than the thickness of the track-wires which are secured to each end of the track thus formed, preferably by being bent through openings, *d′*, from top to bottom therein, as shown. Thus the track-wires at each station form a sort of bight, a single wire being used passed from the station to the turn-plate, bent or threaded through the opening in the end of the track-wire and carried back to its own station, the wires from each station being thereby independent of each other, but it is not intended that no other means of securing the wires to the plate-track may be adopted.

It follows from the foregoing description that when the carrier is discharged from one station toward another, it will feel the im-

pelling action of the wires from that station until it is delivered to the turn-plate-track, travel around this until it reaches the wire extending to the other station, which will be kept normally closed as hereinafter explained, and along this latter it will run until it arrives at its destination. In order to go round the turn-plate, however, it is necessary that one side of the carrier should be cut away, as shown, to pass the body of the plate. This, however, forms no part of my present invention, having been used heretofore in the Barr system. In turning the curve there will be a strong tendency of the carrier to swing outward by centrifugal force, and this, if not lessened, will result in its reaching the other and closed track, at an inclination to the vertical and in passing along that track with a pendulum or staggering movement. To provide against this therefore, I arrange a double guard, preferably a skeleton guard, around this curve. This guard is composed of two or more brackets, D^2, secured to the bottom of the plate, thence bent obliquely downward until reaching a point almost perpendicular below the edge of the plate, or track thereon, but sufficiently within the perpendicular to permit the closed passage of the inner side of the carrier, then vertically downward, to the depth of the carrier, then horizontally to its thickness, then vertically upward to a point above the turn-plate, thence over horizontally a sufficient distance to overhang the turn plate and track and then downward again a short distance, to receive an inner guard, d', at such distance within the track as to come in contact with the upper face of the carriage and curved concentric with said track so that as the carriage speeds around, the upper inside face thereof may rest against this guard. A second guard-wire, d^2, outside of and somewhat below the plate track and concentric therewith, is secured to the outer vertical arms of the bracket to come in contact with the outer face of the carrier below its contact with the track, as it is speeding around and prevent said carrier from swinging outward, while a third guard-wire, d^3, may be applied to the inner perpendicular arms of said brackets. This inner-guard, d^3, is to steady the carrier that its lower end may not swing inward when restrained from swinging outward.

The lower ends of the guard-brackets are each formed of two parallel bars, E, between which can pass slides, E′, having anti-friction rolls, *e*, at their rear, which travel on the edges of the guide-brackets and in front being connected respectively to the upper and lower track-wire. Normally these slides are drawn together by powerful springs, e', one end of one spring being secured to the upper slide, and carried thence down past the other and secured at its lower end to a pin e^2 at the lower end of the guide-bracket, while one end of the other spring is secured to the lower slide and thence carried to an attachment, e^3, at the upper end of the guide-bracket, thus obtaining sufficient length in the springs to insure powerful and lasting contraction so that after the slides have been spread apart to diverge the track wires and impel the carrier from one station, they shall, as soon as released, fly back, bringing the track-wires at that station parallel with each other so as to afford no obstruction to the return of the carrier when impelled from the opposite station.

Any suitable device may be used for spreading the slides apart from each other, that will permit them to return to position under the stress of the spring, but I find it convenient to attach cords, to both slides, that one, F, attached to the upper slide being carried over a pulley, *f*, above said slide, and then led down until it is brought alongside the cord, F′, from the lower slide, when the two are united by a handle, f', depending within convenient reach of the attendant. Thus a direct downward pull will depress the lower slide, but will raise the upper slide, owing to the interposition of the pulley, and spread apart the wires, and as soon as the cords are released from the grasp of the hand, the springs will pull the slides and track wires together again.

For the purpose of assisting the track-slides to their position, a curved plate spring, G, may be applied to the back of the guide-brackets, curving out from the center toward the ends and underlying the anti-friction rolls on the slides so that when the latter are drawn apart they shall press down the spring flat against the bracket, but when relieved, the spring may, in returning to the normal, exert a wedging action on them to carry them back toward the center.

In order to obtain the necessary expansion and contraction in length of the tracks in the operation of the spreading devices, a coiled spring is connected at one end to the end of the track-wire and at the other end to its appropriate slide, so as to expand as the slide is moved away from the opposite track-wire and contract as it is moved theretoward. Preferably, and for the further purpose of taking up slack, both in the track wires and guys, this spring is made as a sort of turn-buckle, shown in one form in the second figure, but in a somewhat different form and in detail in Figs. 11 to 13 of the drawings. In the first form the single coiled spring heretofore mentioned is secured at its ends to the slide and the wire respectively, by eye-rods, H, which have enlarged hubs, *h*, as in Fig. 14 fitting quite snugly the internal diameter of the coil and provided with threads or spiral wings, h', which enter between the coils and can be screwed therealong by turning the rod, thus making the effective length of the spring longer or shorter at will. In the second form, however, two coiled springs, h^2, are used, each receiving at one end one of the eyerods, H, and hubs with its flange or wing and at the other end, or the meeting ends of

the two coils, a single rod or spindle, H′, having at each end a spiral flange or wing, h^3. In this construction the springs must be right and left and the spirals on the central rod must be correspondingly turned, thus when the end rods have been inserted and attached to their respective points of support, for instance one to the spreading slide and the other to the track-wire, the central rod or spindle can be used to bring the coils nearer together or farther apart without disturbing said other attachments. This spring turn-buckle by itself I do not intend to claim herein, having made it the subject matter of an application filed by me on the 26th day of November, 1892, Serial No. 453,180, for Letters Patent for improvements in turn-buckles.

While I have illustrated and described the turn-plate in this case as if used simply for turning a corner in a horizontal line, it is to be understood that by slight modifications in position it may be used for surmounting an elevation; and while also slide-blocks moving in a vertical way and normally held together by springs have been described with means for momentarily spreading or diverging the wires at the sending station and normally closed at the receiving station, it is to be further understood that I do not limit myself to any specific means whereby two line wires extending from station to station, or interrupted midway by a track, are held normally apart momentarily only at the sending end, nor yet do I limit myself to imparting positive movement to both wires at the sending station, since it is evident that one wire may be fixed while the other is moved as in systems heretofore used, but

What I do claim and desire to secure by Letters Patent is:

1. The combination substantially as hereinbefore set forth, with the turn-plate, of the skeleton guide formed as described, of brackets secured to the bottom of the plate, thence bent obliquely and perpendicularly downward, horizontally outward, vertically upward over and downward, and having the guide-ribs or guards attached thereto at about the points stated, above and below said plate.

2. The combination substantially as hereinbefore set forth, with the turn-plate, of wires leading from each station to the track therein passed through the extreme ends of said track and returned to their respective stations, and spreading devices at each station for the wires.

3. The combination substantially as hereinbefore set forth, with the track-wires, of the guide-brackets, the slides moving thereon, the springs arranged to hold said slides against each other at the center of the bracket and means for spreading said slides momentarily apart.

4. The combination substantially as hereinbefore set forth, with the track-wires, the guide-brackets, and the spreading slides moving thereon, of the coiled springs independently connecting each of said track-wires directly to its respective spreading slides.

5. The combination substantially as hereinbefore set forth, with the track-wires, the guide-brackets and the slides moving thereon of the spring-turn-buckle connecting said track-wires and the slides.

6. The combination substantially as hereinbefore set forth, with the track-wires, the guide-brackets, the slides moving thereon and their anti-friction rolls, of the springs extending from the upper slide to the lower end of the guide-bracket and from the lower slide to the upper end of the guide-bracket.

7. The combination substantially as hereinbefore set forth, with the track-wires, the guide-brackets and the slides moving thereon of the cord leading from the upper slide over a pulley and thence down and the cord leading from the lower slide to the first named cord and united to it by a handle whereby the slides can be simultaneously spread.

8. The combination substantially as hereinbefore set forth, with the track-wires, the guide-brackets and the slides having anti-friction rolls moving along side guide-brackets, of the curved spring arranged along the back of said guide-brackets and traversed by said anti-friction rolls.

WILLIAM H. ALBACH.

Witnesses:
A. S. WELLS,
L. VASSALL.